



Pediatric
Eye Specialists

Strabismus Surgery

BENEFITS

Strabismus surgery (eye muscle surgery) is performed to correct a misalignment of the eyes. If the eyes are out of alignment, one eye or the other is suppressed at any given moment, which impairs visual attention, depth perception and motor skills. Misalignment of the eyes also can cause bothersome double vision.

Strabismus surgery can be performed in children as young as four months of age. It is better to perform surgery as early as possible, because the brain circuits for binocular vision (using the two eyes together) are most adaptable at a young age. Strabismus surgery can still be performed in older children and adults as these brain circuits continue to have some adaptability even in teenagers and adults.

Strabismus surgery is performed as an outpatient procedure. Outpatient surgery permits patients to arrive as little as an hour before the scheduled procedure and return home a few hours after its completion.

SURGICAL TECHNIQUE

After you or your child is fully asleep and under general anesthesia, several eye muscles (usually on both eyes) are repositioned using microsurgery. The eye is rotated, using special instruments, so that the incision can be made in the thin covering over the white of the eye, but the eye is not taken out of the head. Very fine stitches are used to reposition the muscles. The surgery itself is precise and the new position of the muscles is based on the measurements obtained during office visits, and measurements obtained with your child asleep. No stitches have to be removed. When the eye muscle is healed the synthetic stitches will absorb on their own. Lasers cannot be used on the eye muscles because they would destroy the muscle tissue.

ALTERNATIVES

By the time surgery is recommended, Dr. Packwood, Norman or Hunt will have carefully considered correction that could be achieved using patching therapy, eye glasses, or prisms. Eye drops are occasionally used before or after surgery, but can never correct eye alignment on a long-term basis.

RISKS

Undercorrections and overcorrections may occur, because not everyone's eye muscles and brain circuits respond in the same way to the same amounts of surgery. Approximately 70 to 85% of patients (depending upon the type of strabismus) have long-term stable eye alignment after one surgery.

Temporary double vision is common after surgery because the brain is not accustomed to the new position of the eye. You or your child may experience double vision for several weeks. A very small number of patients experience some form of double vision for months or longer. Occasionally, Dr. Packwood, Norman, or Hunt prescribes prisms to alleviate double vision.

Re-operation is required in 20 to 40% of patients who do not have proper alignment or binocular vision after the first surgery. Follow-up surgery is sometimes performed a few months to a year or more after the first surgery to ensure that the results from the first surgery have stabilized. It is almost always possible to perform a re-operation if one is required.

Complications of a serious nature are rare (the risk of retinal detachment, blinding infection in the eye, or severe anesthetic reaction is 1 in 2,500 or less). Strabismus surgery is considered one of the safest of all eye procedures.

ON THE NIGHT BEFORE SURGERY

No food or milk is permitted after midnight. Medicines may be taken with sips of water. Only apple juice, Sprite, Kool Aid, and water may be taken up to three hours before the admission time.

If you or your child is acutely ill (has a fever, deep cough, or vomiting) in the days preceding surgery, please call us at (817) 878-5454.

TIME OF OPERATION

The time you have been given for the operation is tentative and may need to be changed on the day of surgery. In general, patients are taken by age with the youngest going first. This is not applicable for adults.

ANESTHESIA

The anesthesia doctor may order a preoperative oral sedative medication. Young children are put to sleep within seconds by breathing gas from a mask held near their face. An intravenous (IV) line and a breathing tube are placed only after they are asleep and the breathing tube is removed before they are fully awake.

Children age 13 or older who are not unduly frightened may be given an IV line beforehand so that sedative medications can be administered. Depending on the special needs or medical condition of a patient, the Anesthesiologist may alter the routine.

LENGTH OF SURGERY

Generally strabismus surgery is completed within an hour, although this may vary from 30 minutes to 90 minutes depending on the complexity of the case. Immediately after the surgery, Dr. Packwood, Norman or Hunt will find the family in the waiting area to discuss the operation.

RECOVERY

The patient is taken from the OR to the Post Anesthesia Recovery Unit for 15-30 minutes. In this room the patient awakens more fully from the anesthesia and is monitored by the nursing staff. After 15-30 minutes the family will be called from the waiting room to join the patient in the Recovery Area. As the patient awakens he or she will be encouraged to drink juice or eat a popsicle, and the intravenous line will be removed.

Eye bandages are not usually applied. The patient may be reluctant to open the eyes because of mild light sensitivity, eye soreness or a scratchy sensation. You may see a few drops of blood stained tears draining from the eyes. These can be wiped away with a wash cloth or tissue. Discourage the patient from rubbing their eyes.

POSTOPERATIVE DISCOMFORT AND NAUSEA

There may be some discomfort from the surgery, and the nurses will treat it with the appropriate medication. Mild nausea is common after general anesthesia. If vomiting occurs, medication may be prescribed.

DISCHARGE TO HOME

Most patients are discharged to home within two to three hours after surgery. The patient may return to day-care, school, or to work as soon as 1 or 2 days after surgery.

CARE AT HOME

After discharge, it is rarely necessary to administer any prescription medication for discomfort. Tylenol may be used. Antibiotic ointment or drops are usually applied to the eyes to help healing and prevent infection. The medicine comes in a tube or bottle and is given to you by the surgery nurse at the time of discharge. Beginning that night, squeeze about $\frac{1}{4}$ inch of ointment or 1 drop just inside the lower lids or on the lower lashes, as directed for 7 days.

Once home, the patient may resume all normal activities. Younger children often play within hours after surgery. Older children may be tired for a day or two. Some children feel sleepy or grouchy or even vomit the day after surgery. Bathing, showering, and washing of the hair will not interfere with the healing. We prefer your child avoid submerging the eyes under water in a bath or swimming pool for 1 week following the surgery. Redness of the eyes usually disappears in a few weeks.

It is usually not possible to tell if the surgery worked in the first days after the procedure. In the weeks and months following surgery the brain circuits must adapt to the new position of the muscles to get the eyes to track together. We will have an estimate of the success at the visit 1 week after the surgery, and a more precise judgment of the success at 3-4 months after surgery.

POST-OP CHECKS IN THE EYE CLINIC

The Surgery Scheduler will tell you the day and time to return to the office for the first brief post-operative check, 5-10 days after the surgery. If you wish to arrange the appointment yourself, phone (817) 878-5454 and tell the receptionist you need to schedule a post-operative check. A second post-op check is usually performed 6 weeks after the surgery.